What Is Claimed Is:

1. An automatic blood pressure measuring instrument for measuring and displaying a blood pressure of a subject, comprising:

a pressure sensor for obtaining a pulse wave from a wrist of the subject;

a pulse wave signal processing section for amplifying, filtering and noise-removing the pulse wave applied from the pressure sensor;

an electrocardiogram monitor for measuring a systolic blood pressure and a diastolic blood pressure and converting the measured results into electrical signals;

an electrocardiogram signal processing section for amplifying, filtering and noise-removing the converted electrocardiogram measurement signals applied from the electrocardiogram monitor;

an A/D converting section for converting the AC signals, which are applied from both the pulse wave signal processing section and the electrocardiogram signal processing section, into DC signals;

a controlling section for comparing and analyzing the pulse wave signal and the electrocardiogram signals applied through the A/D converting section to operate the blood pressure of the subject; and

a display for displaying the blood pressure of the subject operated at the controlling section.

2. An automatic blood pressure measuring instrument according to claim 1, further comprising:

a program storing section for storing an operation program of the controlling section; and

a data storing section for storing the pulse wave signal and the electrocardiogram signals applied from the A/D converting section for a predetermined time and storing operation data operated at the controlling section.

3. An automatic blood pressure measuring instrument according to claim 1, wherein the pulse wave signal processing section comprises:

a first impedance matching means for matching impedances of the inputted pulse wave signal and output signal;

a pulse wave signal amplifying means for amplifying the signals outputted from the first impedance matching means; and

a first notch filter for removing a noise of a commercial frequency from the signals amplified at the pulse wave signal amplifying means.

4. An automatic blood pressure measuring instrument according to claim 3, wherein the first notch filter comprises:

an OP amplifier for amplifying the signals amplified at the pulse wave signal amplifying means and inputted a non-inverting terminal thereof;

a low-pass filter provide on a loop fed from an output terminal of the OP amplifier back to an inverting terminal and for removing the noise of the commercial frequency;

a first variable resistor connected in parallel with the non-inverting terminal of the OP amplifier; and

a second variable resistor connected in parallel with the low-pass filter,

whereby the first notch filter adjusts the commercial frequency of the applied signals.

5. An automatic blood pressure measuring instrument according to claim 1, wherein the electrocardiogram signal processing section comprises:

an amplifying section for amplifying the electrocardiogram signals generated from the electrocardiogram monitor; and

a filtering section for filtering and noise-removing the signals amplified at the amplifying section.

6. An automatic blood pressure measuring instrument according to claim 5, wherein the filtering section comprises:

a fourth low-pass filter for removing a noise from the amplified signals applied from the amplifying section;

a third impedance matching means for matching an impedance of the input signal applied from the fourth low-pass filter and an impedance of an output signal; and

a second notch filter for removing the noise of the commercial frequency of the signals applied from the third impedance matching means.

7. An automatic blood pressure measuring instrument according to claim 5, wherein the amplifying section comprises:

a first differential amplifier including a first gain adjusting means for adjusting a gain of the electrocardiogram signals measured from one side of a body of the subject, a second low-pass filter for removing a low band noise from the adjusting signals applied from the first gain adjusting means, and a first electrocardiogram amplifying means from amplifying the signals filtered at the second low-pass filter;

a second differential amplifier including a second gain adjusting means for adjusting a gain of the electrocardiogram signals measured from the other side of a body

of the subject, a third low-pass filter for removing a low band noise from the adjusting signals applied from the second gain adjusting means, and a second electrocardiogram amplifying means from amplifying the signals filtered at the third low-pass filter; and

a second impedance matching means for matching an impedance with the filtering section when the amplifying signals of the first and second differential amplifiers are applied.

8. An automatic blood pressure measuring instrument according to claim 7, wherein the first and second differential amplifiers further comprises an inverse current preventing means connected to an input terminal to which the measurement signals are applied from electrodes of the electrocardiogram monitor.

9. An automatic blood pressure measuring method for measuring a blood pressure from a wrist of a subject in a non-invasive method, comprising the steps of:

obtaining, amplifying and filtering a pulse wave from the wrist of the subject;

measuring a systolic blood pressure and a diastolic blood pressure, and converting the measured results into electrical signals, and amplifying and filtering the converted results;

converting AC signals of the pulse wave and the electrocardiogram into DC signals after the amplifying and filtering steps;

comparing the pulse wave and electrocardiogram signals converted at the converting step to operate the blood pressure of the subject; and

displaying the blood pressure operated in the operating step.

10. An automatic blood pressure measuring method according to claim 9,

wherein the comparing and operating step comprising the substeps of:

inputting the pulse wave and electrocardiogram signals;

comparing the pulse wave and electrocardiogram sensing signals inputted at the measuring step and operating a transition time parameter, an integral parameter, an area parameter and a maximum amplitude parameter; and

combining constants representing a change quantity of the blood pressure according to the transition time parameter, the integral parameter, the area parameter and the maximum amplitude parameter operated at the comparing and operating substep and according to changes of the parameters, and operating the combined results, and operating a maximum blood pressure and a minimum blood pressure.

11. An automatic blood pressure measuring method according to claim 9, wherein the transition time parameter is a time interval between maximum amplitudes of a waveform of the pulse wave and waveforms of the electrocardiogram signals.

12. An automatic blood pressure measuring method according to claim 9, wherein the integral parameter is an integral value of a data value between end points of a selected range of the pulse wave.

13. An automatic blood pressure measuring method according to claim 9, wherein the area parameter is an integral value of an range joining base lines on both sides of the selected range of the pulse wave.

14. An automatic blood pressure measuring method according to claim 9, wherein the maximum amplitude parameter is a maximum amplitude within a designated of the integral and area parameters.